

REMARKS/ARGUMENTS

In the Final Office Action of October 13, 2009, claims 1-8 and 10-15 are allowed. Additionally, claims 16 and 20 are rejected. Furthermore, claims 18 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicants hereby request reconsideration of the application in view of the below-provided remarks.

Allowed Claims and Allowable Subject Matter

Applicants appreciate the Examiner's review of and determination that claims 1-8 and 10-15 are allowed. Additionally, Applicants appreciate the Examiner's review of and determination that claims 18 and 19 recite allowable subject matter. In particular, the Final Office Action states that claims 18 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

At this time, Applicants choose not to rewrite claims 18 and 19 in independent form including all of the limitations of the base claim and any intervening claims. Instead, Applicants respectfully assert that the pending claims are allowable based on the remarks below.

Claim Rejections under 35 U.S.C. 102 and 35 U.S.C. 103

Claim 16 is rejected under 35 U.S.C. 102(e) as allegedly being anticipated by Napolitano (U.S. Pat. No. 6,981,011). Claim 20 is rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Napolitano. However, Applicants respectfully submit that claims 16 and 20 are neither anticipated by nor obvious over Napolitano for the reasons provided below.

Independent Claim 16

Claim 16 recites:

“A method for efficiently generating complex sinusoids of a desired frequency using an oscillator comprising the steps of:
 successively multiplying a current phasor by a predetermined value once every sampling interval to create a plurality of next phasors by the oscillator; and
 compensating for cumulative round-off errors (28) occurring within the next phasors by the oscillator.” (emphasis added)

Applicants respectfully assert that Napolitano fails to disclose “*compensating for cumulative round-off errors (28) occurring within the next phasors by the oscillator,*” (emphasis added), as recited in claim 16. Therefore, Applicants respectfully assert that claim 16 is not anticipated by Napolitano.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Napolitano discloses that a first phasor and a delta phasor are multiplied to produce a second phasor. (See Fig. 4, step 540, and column 6, lines 15 and 16 of Napolitano). The Final Office Action on page 2 suggests that the first phasor of Napolitano is equivalent to the “*current phasor*” of claim 16 and that the delta phasor of Napolitano is equivalent to the “*predetermined value*” of claim 16. Additionally, the Final Office Action on page 2 suggests that the second phasor of Napolitano is equivalent to one of the “*next phasors*” of claim 16. However, Applicants respectfully assert that Napolitano fails to disclose compensating for cumulative round-off errors occurring within the second phasor. Napolitano discloses that the magnitude error of the second phasor is corrected. (See Fig. 4, step 590, and column 6, lines 33-36 of Napolitano). However, Napolitano is silent as to correcting cumulative round-off errors occurring within the second phasor. Because Napolitano is silent as to correcting cumulative round-off errors occurring within the second phasor, Applicants respectfully assert that Napolitano fails to disclose “*compensating for cumulative round-off errors (28) occurring within the next phasors by the oscillator,*” (emphasis added), as recited in claim 16. Thus, Applicants respectfully assert that claim 16 is not anticipated by Napolitano.

Dependent Claims 18-20

Claims 18-20 depend from and incorporate all of the limitations of independent claim 16. Thus, Applicants respectfully assert that claims 18-20 are allowable at least based on an allowable claim 16.

Additionally, Applicants respectfully assert that the rejection of claim 20 is improper because the Final Office Action does not establish a *prima facie* rejection for claim 20. In order to establish a *prima facie* rejection of a claim under 35 U.S.C. 103, the Final Office Action must present a clear articulation of the reason why the claimed invention would have been obvious. MPEP 2142 (citing *KSR International Co. v. Teleflex Inc.*, 550 U.S. ___ (2007)). The analysis must be made explicit. *Id.* Additionally, rejections based on obviousness cannot be sustained by mere conclusory statements; instead there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. *Id.*

The Final Office Action merely concludes that the indicated subject matter is well-known. In particular, the Final Office Action on page 3 merely concludes that the limitations of claim 20 are purportedly “well known in the art,” and that it would be “obvious in order to prevent aliasing.” Applicants respectfully assert that the Final Office Action does not provide any articulated reasoning with some rational underpinning to support the obviousness rejection. Thus, Applicants respectfully assert that the Final Office Action has failed to establish a *prima facie* rejection for claim 20.

CONCLUSION

Applicants respectfully request reconsideration of the claims in view of the remarks made herein. A notice of allowance is earnestly solicited.

Respectfully submitted,
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